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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,160	03/24/2004	James Huang	040140	6474
23850	7590	02/21/2007		
ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP 1725 K STREET, NW SUITE 1000 WASHINGTON, DC 20006			EXAMINER FORTUNA, ANA M	
			ART UNIT	PAPER NUMBER
			1723	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		02/21/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/807,160	HUANG ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Ana M. Fortuna	1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 July 2006.
- 2a) ☐ This action is FINAL.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>8/2/04</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Double Patenting*

1. Claims 1-6 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 4-5, and 7-9 of copending Application No. 10/808,446. Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications claims are directed to substantially the same material, a porous layer of PTFE having the same properties and supported by the same material e.g. a polyester layer. The claims are directed to the same product for different intended purposes, a clothing material and a filter material respectively. Both products have the same thickness, and have the PTDE layer made by drawing in a biaxial direction. Claims 1 and 4 of the present invention are not limited with regards to the placing the reinforcing material at any face of the PTFE material; therefore, reinforcing the material at any face is covered by the claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

2. Claim 1 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim1 of U.S. Patent No. 6,852,223 in view of Minor et al (US 6,015,610). Claim 1 of patent '223 discloses the asymmetric porous polytetrafluoroethylene membrane with a contact angle for water of 120 to 135 degree. The diffuse reflectance is not claimed in the patent ('223). Minor et al teach modifying the degree of reflectance of a polytetrafluoroethylene membrane by coating the material e.g. expanded polytetrafluoroethylene with a material having a high index of refraction,

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such as titanium dioxide (abstract). The material in Minor et al has a thickness within the thickness of patent '223 (see column 7, lines 60-65), is microporous, asymmetric, and biaxially expanded and has a diffuse selectivity equal or greater than 93 % (see column 7, lines 1-20 and claim 15). It would have been obvious to one skilled in this art at the time this invention was made to improve the reflectance of a PTFE membrane or material by treating the membrane or porous material, e.g the membrane of '223, with zinc oxide or titanium oxide to improve the PTFE refraction index. It would have been also obvious to one skilled in the art to select and inherently high reflectance of light PTFE material for the membrane, which are also suggested and discussed in Minor et al as being known in the art (see column 1, last paragraph, through column 2 first paragraph).

***Claim Rejections - 35 USC § 102***

3. Claims 1-3, 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Huang et al (US 6,852,223). Huang et al teaches the membrane made from the same material, having an asymmetric structure, contact angle, and thickness (abstract claims, column 1, lines 46-68 through column 6). Huang et al also discloses the membrane having a dense skin with thickness of 0.2 to 5 microns, and pore size of 0.03 to 1.0 micron (column 4, lines 46-53). The diffuse reflectance is not disclosed in patent to Huang et al, however this property appears to be inherent of the membrane made from the same process, material, and the same degree of porosity of surface densification. Both the present membrane (see specification page 9, lines 19-24, page 11, lines 10-19) and the

Huang et al.'s membrane are disclosed as having the same skin porosity and thickness (see column 7; last paragraph through column 8, lines 1-53, column 6, lines 30-38

The applied reference has a common inventors and assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

The biaxial stretching and membrane thickness are disclosed by Huang et al (column3, lines 29-31, and claims 3-10).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4-5 rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al (US patent 6852,223) as applied to claims 1-3 and 6 above in view of Minor et al. (US 6,015,610) or Henn et al (US 5,026,591). Huang et al, discussed in the paragraph above, teaches supporting the asymmetric membrane film on a cloth (see column 6, lines 40-47). The cloth materials are not disclosed.

Patent to Minor et al, also discussed above teaches laminating or supporting biaxially expanded microporous membranes on a fabric, woven or non-woven materials made from a polymer material e. g. polyester, etc (abstract, column 8, lines 49-67), the PTFE material has a reflectance to provide a diffuse reflectivity equal or greater than 93 %(see claim 15).

Patent to Henn et al also teaches biaxially expanded PTFE microporous material bonded to a fabric material, e.g. spunbonded polyamide (Nylon), and polyester (see column 4, lines 41-48); column 11, lines 61-68, and column 12, lines 1-2 and lines 23-31). It would have been obvious to one skilled in this art at the time the invention was made to select cloth of the prior art, such as the ones suggested by Minor et al and Henn et al to produce laminated products for various use and distinct functionalities, e.g. perselective membrane, containers, etc (see Henn et al at column 7, lines 4-22) and Minor et al (see column 7, lines 18-21, column 8, lines last paragraph, bridging column 9, first paragraph).

### ***Conclusion***

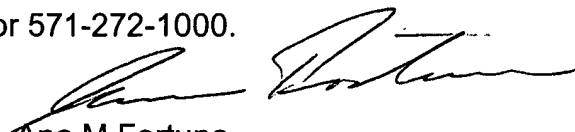
6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Additionally cited patents teach expanded PTFE porous material bonded and non-bonded to other substrates, and being microporous, e.g. 4,863,885, 653,882 teaches asymmetric PTFE membranes.

7. The IDS filed on 7/2/04 have been considered, a copy of Form 1449 signed, is attached for your records.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ana M. Fortuna whose telephone number is (571) 272-1141. The examiner can normally be reached on 9:30-6:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on (571) 272-1151. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Ana M Fortuna  
Primary Examiner  
Art Unit 1723

AF  
July 17, 2006